



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/742,128	12/19/2003	Ankur P. Panchbudhe	VRT0117US	5026
66429 7590 07/07/2008 CAMPBELL STEPHENSON LLP 11401 CENTURY OAKS TERRACE BLDG. H, SUITE 250 AUSTIN, TX 78758				
EXAMINER				
DOAN, DUC T				
ART UNIT		PAPER NUMBER		
2188				
MAIL DATE		DELIVERY MODE		
07/07/2008		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/742,128

Applicant(s)

PANCHBUDHE ET AL.

Examiner

DUC T. DOAN

Art Unit

2188

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 May 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 27, 29-42, 44-46, 48-50, 52-54 and 62-64 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 27, 29-42, 44-46, 48-50, 52-54 and 62-64 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 5/22/2008
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Status of Claims

Claims 1-61 have been presented for examination in this application.

Claims 1-26, 28, 43,47, 51 and 55-61 have been canceled.

Claims 62-64 have been added.

Claims 27,29-42,44-46,48-50,52-54 and 62-64 remain pending.

Claims 27,29-42,44-46,48-50,52-54 and 62-64 are rejected.

The applicant's remarks and amendments filed 5/22/2008 have been considered with the results that follow,

With regard to the rejections of claims 46-49,50 and 52-53 under 35 U.S.C 101, the amendments to claims 46,50 and 52-54 have overcome these rejections.

Information Disclosure Statement

The Information Disclosure Statements received 5/22/2008 have been considered. See attached PTO-1449(s).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

A person shall be entitled to a patent unless -

(a) the invention was known or used by others in this country or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(c) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

Claims 27,29-30,32-42,44-46,48-50,52-54, and 62-64 are rejected under 35 U.S.C. 102 (c) as being anticipated by Miyata et al (US 2003/0225972).

As in claim 27, Miyata describes a method comprising: in response to a request to perform an operation on a first set of locations of a plurality of location in a storage area (Miyata's Fig 11, paragraphs 87-88 discloses a mechanism that the controller Fig 1: #131 perform a copy duplicate operation by registering the duplicate function. This processing is executed by the client computer. In other words, the duplicated function is formed/registered in response to a request for duplication operation being processed by client computer Fig 1: #11a), and performing the operation upon a given location in the first set of locations of the plurality of locations in the storage area only if the given location is identified in the at least one location description of the sieve associated with the operation (Miyata's paragraph 86, Fig 2 discloses performing a specific operation on the data/locations identified by attribute bits Fig 2: #202 having value of 1);wherein the sieve comprises at least one location description and a property, wherein the property comprises information identifying the operation (Miyata further discloses a mechanism comprising structures Fig 4, Fig 2 that describe location (Fig 2: LBA) and property

comprises information identifying operation such as copying data to cache (Fig 2: #203 attribute bit, for example, Miyata's paragraph 86 discloses when the file attribute bit is one, the copy operation is necessary performed on the data block at the location indicated in Fig 2) and wherein the at least one location description identifies only the set of all storage locations within the storage area upon which the operation can be performed (Miyata's Fig 2, Fig 4-5 further disclose that all bits Fig 2: #203 with value 1 and these blocks belong to the files as shown in Figs 4, 5 identifies all storage locations within the storage area upon which the operation can be performed; Miyata teaches the extended file attributes identifies only the set of all storage locations of files in which an operation can be performed, see paragraph 59).

As in claim 29, Miyata further describes wherein the at least one location description is specified by an application program (Miyata's paragraphs 96-99 describes API and methods for user to specifying the areas to be duplicated, Miyata paragraphs 34-37,39-40,44 further discloses the mechanism for application program to instruct and communicate with other modules in host Fig 1: #13 and storage unit Fig 1: #14).

As in claim 30, Miyata further describes wherein the operation is replication (Miyata's column 3, lines 18-21, and paragraph 84).

As in claim 32, Miyata further describes wherein the at least one location description and the corresponding property describing the type of the operation are designated by a requester (Miyata's paragraphs 96-99 describes API and methods for user to specifying the areas to be duplicated, Miyata paragraphs 34-37,39-40,44 further discloses the mechanism for application program to instruct and communicate with other modules in host Fig 1: #13 and storage unit Fig 1: #14).

As in claims 33-35, Miyata further describes obtaining a designation of the operation to be performed (claim 33, paragraph 86-87, Fig 11, the processor #13 obtained the copy “ditto” operation designated by client computer #11); wherein the requester manages data in the storage area (claim 34, Miyata’s paragraph 96); wherein the requester performs a management function of a set of management functions for the storage area (claim 35, Miyata’s paragraph 95) .

As in claims 36, Miyata further describes wherein the requester identifies a respective physical location described in the at least one location description (Miyata’s paragraphs 96-98 disclose that the client/user identifies respective storage regions for the copy/duplicate operation).

As in claim 37, Miyata describes wherein each location in the second set of locations is specified by a beginning location and a number of contiguous locations starting at the beginning location (Miyata ’s column 6, lines 1-3, and lines 30-39).

As in claim 38, Miyata describes wherein the at least one location description is designated by a set of indicators, wherein the set of indicators comprises an indicator for each respective location of the plurality of locations Miyata’s Fig 4, Fig 2, paragraphs 50-52 describes each attribute bit associated with its corresponding storage location such as a data block), and each indicator of the set of indicators indicates whether the respective location for the indicator is described in the at least location description (Miyata’s Fig 4, Fig 2, paragraphs 50-52 describes each attribute bit describing the corresponding operation such as duplication for the corresponding data block).

As in claim 39, Miyata further describes obtaining a second set of locations location; and performing a second operation on the second set of location after the operation is performed on

the given location (Miyata's paragraph 75 further discloses several operations are recursively operating on several set of locations (i.e several files)).

As in claim 40, Miyata further describes the at least one location description and the corresponding property describing the type of the operation are designated by the requester; and the operation and the second operation are designated by the requester (Miyata's paragraphs 67-68,98 further discloses information corresponding to commands for different type of operations, and attributes can be obtained from user)

As in claim 41, Miyata further discloses each type of operation in the sieve is performed on a given location if the sieve is specified (Miyata's paragraphs 70, 102 further disclose a mechanism in which type of operations is specified, for example caching or remote copy; and the specific operation is performed accordingly on the give location that being specified for the operation, see Miyata's paragraphs 85-86).

As in claim 42,46,50 the claims are rejected based on the same rationale as of claim 27.

As in claims 44,48,52 the claims are rejected based on the same rationale as of claim 32.

As in claims 45,49,53 the claims are rejected based on the same rationale as of claim 33.

As in claim 54, it rejected based on the same rationale as of claim 50. Miyata's Fig 1 further discloses a system includes processor (Fig 1: #11a) and computer readable media (Fig 1: #143).

As in claim 62, Miyata further discloses providing a function name to a requestor, wherein the requestor generated the request (Miyata's paragraph 100, a function name associating with remote copy function is provided to a software code module that carries out the remote copying operation).

As in claim 63, Miyata further discloses wherein the property also comprises information specifying a characteristic of data stored in the first set of locations, wherein the operation is only performed on the given location if data stored in the given location has the characteristic (paragraph 43, the operation is only performed on a given location of corresponding files that are cached).

As in claim 64 Miyata further discloses wherein the property comprises information identifying a plurality of operations (Miyata's Fig 2, Examiner note: an operation comprises of a plurality of operations. For example a copy operation comprise read operation to read data from source and write data operation to store data to a destination)

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 31 is rejected under 35 U.S.C. 103(a) as being unpatentable over Miyata et al (US 2003/0225972) as applied in claim 27, and further in view of Krishnamurthy (US 6823436).

As in claim 31, Miyata does not expressly describe the claim's detail of subsets. However, Krishnamurthy's column 4 lines 43-49 describes as follows: obtaining a set of entities,

wherein the first set of locations comprises a plurality of subsets of locations (data blocks in an extent), It would have been obvious to one of ordinary skill in the art at the time of invention to include copy method as suggested by Krishnamurthy in Miyata's system such that data is being copied from the source storage area to the destination area in a small chunk of contiguous blocks of data, and thereby data can be provided to the host from either source drive or target drive much sooner (Krishnamurthy's column 4 lines 13-30).

Regarding the claim's aspect of permission, Miyata clearly discloses the file attributes contains information for permitting operations to be performed on the file (see Miyata's Fig 4, paragraph 52).

Response to Arguments

With regard to the rejections of claims 46-49,50 and 52-53 under 35 U.S.C 101, the amendments to claims 46,50 and 52-54 have overcome these rejections.

Applicant's arguments regarding the rejections of claims 27,29-30,32-42,44-46,48-50, and 52-54 under 35 U.S.C 102(c) are not persuasive. Examiner respectfully traverses Applicant's arguments for the following reasons:

A) Applicant argues "....Applicants note that element 203 includes bits that are set to 0 and bits that are set to 1. **Therefore, by the Office Action's own reasoning, element 203 identifies storage locations upon which the operation cannot be performed, in addition to those upon which the operation can be performed.** This reasoning is supported by the disclosure in Miyata of the need for a judgment of the value of each bit of element 203. See, e.g., Miyata ¶ 112. If the value of a bit in element 203 is false (0), the corresponding block is not processed (the operation is not performed on that block), *Id.* Since Miyata discloses that not all

locations identified in FIG. 2 can be processed, Applicants respectfully submit that the cited portions of Miyata do not, and cannot, anticipate amended claim 27, which recites that the seive's[sic] location description only identifies all storage locations upon which the operation can be performed".

Applicant's argument is hard to understand, "Therefore, by the Office Action's own reasoning, element 203 identifies storage locations upon which the operation cannot be performed, in addition to those upon which the operation can be performed ..". It's not clear why identifying both locations to be operated on and identifying locations not to be operating leads to any contradiction of reasoning. Applicant further argues "Since Miyata discloses that not all locations identified in FIG.2 can be processed.... Miyata do not ..anticipate amended claim 27, which recites that the sieve's location description **only** identifies all storage locations upon which the operation can be performed".

Applicant argument actually reinforces Miyata teaching of the amended claim that is Myata does not teach every storage locations in which the operation must be performed, and Miyata clearly teaches only certain storage locations are used for performing an operation, as an example the caching data of certain storage locations of corresponding files to be cached, see Myata's paragraph 59.

B) Applicant's arguments regarding the rejections of claims 42, 46 and 50 are the same as the arguments offered for claim 27 and the same responses apply. The respective dependents claims 29-30,32-41,43-45,47-49,51-54, and 58-61 are rejected as discussed above.

C) Applicant's argument with regard to the rejection of claim 37 under 35 U.S.C 103(a) is not persuasive.

Applicant argues "... **neither the cited portions of Krishnamurthy nor the cited portions of Miyata, either alone or in combination disclose each location specified by a number of contiguous locations.** Krishnamurthy explicitly teaches away from including a number (or count) of contiguous locations. For example, Krishnamurthy teaches "no storage except for the single bit itself is required." . Examiner disagrees.

Krishnamurthy clearly discloses "each location specified by a number of contiguous locations as claimed. Examiner notes that the claim's language set forth broadly a location merely indicates a place for data regardless of granularity, i.e **a location is specified by other locations.** Krishnamurthy's extent is such a location. An extent is known in the art as a representation of a contiguous chunk of data/storage space. Thus an extent is specified by an offset corresponding to the claim's first location, and size of contiguous chunk of data which comprises of several data blocks. This several data blocks correspond to the claimed subset of locations. Thus Krishnamurthy clearly teaches the claim's limitation as recited, And therefore Applicant's argument is not persuasive.

In addition, Applicant's argument regarding of Krishnamurthy's teaching "no storage except for the single bit itself is required..." is not understood. It's not clear how this teaching has any relevant to the claim's recited limitations as discussed above. Thus Examiner submits that Applicant further fails to set forth Krishnamurthy's single bit having any relevant to the limitations as recited in the claim, let alone teaching away from the claim's limitations.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 36 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

When responding to the office action, Applicant is advised to provide the examiner with the line numbers and page numbers in the application and/or references cited to assist examiner to locate the appropriate paragraphs.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Duc T. Doan whose telephone number is 571-272-4171. The examiner can normally be reached on M-F 8:00 AM 05:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hyung S. Sough can be reached on 571-272-6799. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

/Hyung S Sough/
Supervisory Patent Examiner, Art Unit 2188
06/30/08